OKD Administration II

Duration: 5 days (8hrs/day)

Prerequisites:

- Basic knowledge of Linux Server Administration.

Lab Requirement: Koenig-DC (https://linuxlab.koenig-solutions.com)

Module 1 – Working with Kustomize

Introduction to Kustomize

Lab: Creating Base in Kustomize

Working with Overlays

Lab: Creating Dev and Prod Overlays

Module 2 – Working with Helm and Templates

Introduction to Helm

Lab: Installing Helm

Lab: Creating Helm Chart

Lab: Creating first application with Helm Chart

Lab: Working with Existing Helm Chart Available by Community

Introduction to Templates

Lab: Working with OpenShift Templates

Module 3 – Managing Users and Permissions

Configure Identity Providers

Lab: Configure HTPasswd Identity Provider for Authentication

Lab: Define Role-based Access Control and Apply Permissions to Users

Module 4 – Network Policies and Ingress TLS

Introduction to Network Policy

Lab: Creating Network Policy to Restrict Incoming and Outgoing Traffic of Pods

Lab: Restrict Traffic between Multiple Namespaces

Lab: Creating TLS Certificates

Lab: Creating Ingress Rules and Integrate with TLS Certificates

Module 5 – Project Based Quota

Configure Compute Resource Quotas and Kubernetes Resource Count Quotas Per Project

Lab: Configure Project Quota

Self Provisioner Role

Lab: Self Provisioner Role

Module 6 – Managing Operators

Explain Operator Pattern and Different Approaches for Installing and Updating Kubernetes Operators

Lab: Install Operators with Web Console

Lab: Install Operators with CLI

Module 7 – Application Security

Introduction to Service Accounts

Lab: Creating Service Accounts and Apply Permissions

Manage Security Context Constraints

Lab: Manage Security Context Constraints

Lab: Automate Regular Tasks by using Kubernetes CronJobs

Module 8 – Working with StatefulSet

What is StatefulSet?

Difference between Stateful and Stateless Application

Lab: Creating StatefulSet

Lab: Attaching Storage with StatefulSet

Module 9 – MultiContainer Application

What is Init Containers

Lab: Init Containers

What is Sidecar Containers

Lab: Sidecar Containers

Module 10 – OpenShift Updates (Theory)

Describe the Cluster Update Process

Identify Applications that use Deprecated Kubernetes APIs

Update OLM-Managed Operators by Using the Web Console and CLI